

**Federal Aviation Administration
800 Independence Ave SW
Washington, DC 20591**

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Petition for Exemption: Eligibility of the Airline Transport Pilot Certificate with Restricted Privileges

Contact Information

Charles Hunt
300 Haskin Knoll, Peachtree City, GA 30269
Cnhunt84@gmail.com
(863) 370-9602

In accordance with 14 CFR 11, I ask that the FAA consider my education and experience as an alternate means of acquiring or surpassing both the knowledge and skills outlined in paragraph 9 of Advisory Circular 61-139 [5] and the approved institutions specified in the FAA's Institutional Authority List [2], and ultimately satisfying 14 CFR 61.160 and the Restricted ATP at 1,000 flight hours requirements.

I would like to first reference the July 2013 Press Release by the Federal Aviation Administration, "FAA Boosts Aviation Safety with New Pilot Qualification Standards." [1] Following the crash of Colgan Air Flight 3407 in February 2009, a Congressional mandate in the Airline Safety and Federal Aviation Administration Extension Act of 2010 increased the qualification requirements for first officers who fly U.S. passenger and cargo airlines. This rule requires first officers to hold an Airline Transport Pilot certificate requiring 1,500 total flight hours. Previously, first officers were required to have only a commercial pilot certificate, which requires 250 flight hours. To quote the sitting FAA Administrator Michael Huerta, "The rule gives first officers a stronger foundation of aeronautical knowledge and experience before they fly for an air carrier."

Pilots with fewer than 1,500 hours or under the minimum age of 23 may obtain an ATP certificate with "restricted privileges." This allows a pilot to act as a first officer on a passenger or cargo carrying airline. The paths to receiving a restricted ATP are as follows:

- Military pilots with 750 hours total time as a pilot
- Graduates holding a Bachelor's degree with an aviation major from an approved institution with 1,000 hours total time as a pilot
- Graduates holding an Associate's degree with an aviation major from an approved institution with 1,250 hours
- Pilots who are at least 21 years old with 1,500 flight hours

14 CFR 61.160 states the requirements for a student to be eligible for a restricted privileges ATP Certificate. Aviation Majors, at both the Bachelor's and Associate's level, and approved institutions are specified in the FAA's Institutional Authority List [2].

- The program must include flight and ground training for the commercial certificate and instrument rating.
- The programs must either be a part 141 approved pilot school or affiliated with a part 141 school in which the student completes his/her ratings.
- Additionally, a specified number of semester credit hours (dependent upon degree level) of aviation and aviation-related coursework that has been recognized by the Administrator as coursework designed to improve and enhance the knowledge and skills of a person seeking a career as a professional pilot and outlined in paragraph 9 of Advisory Circular 61-139 [5] as the following:
 - Ground and Flight Training for Certificates and Ratings (Instrument and Commercial)
 - Aerodynamics
 - Aircraft Performance
 - Aircraft Systems

- Aviation Human Factors
- Air Traffic Control and Airspace
- Aviation Law and Regulations
- Aviation Weather
- Aviation Safety

As Mr. Huerta emphasized, safety is paramount in aviation and experience is irreplaceable. The Restricted ATP pathway recognizes those with aviation training and allows qualified training to suitably replace experience. However, universally limiting an experience substitute to a narrow training pathway shall exclude some of the safest and most professional aviators who have been equally or superiorly educated and trained.

Top military academies appear to feel that a graduate in Aerospace Engineering has been intellectually vetted and has a strong foundation to become top military aviators.

- The United States Naval Academy School of Engineering and Weapons [3], which states the following about an Aerospace Engineering degree “Naval officers with advanced degrees in the Aero/Astro fields may be assigned to billets involved with the research, development, testing, and evaluation of Navy/Marine Corps aircraft or spacecraft projects. Organizations with technically challenging billets include the Naval Air Systems Command, Naval Research Laboratory, Test Pilot School, the Naval Network Warfare Command, the United States Strategic Command, of course, the National Aeronautics and Space Administration (NASA) where more than a dozen graduates of the Naval Academy's Aerospace Engineering program have become astronauts.” And goes on to state “The Aerospace Engineering major provides students with a more in-depth understanding of the systems they will work with in aviation than any other major, and certainly helps prepare students for a career in that field.”
- The United States Air Force Academy Engineering Division [6] states the following about an Aeronautical Engineering [6] degree, “In the aeronautical engineering major, Cadets study aerodynamics, propulsion, flight mechanics, stability and control, aircraft structures, materials and experimental methods” and lists potential job assignments for cadets of their program as the following: Pilot, Experimental Test Pilot, RPA Pilot, and Flight Test Engineer.”

I do not pretend to be qualified to earn a restricted ATP at 750 hours allowed exclusively to military pilots due to their superior training and irreplaceable experiences, but I do believe that my education and training satisfies the 1,000 hour restricted ATP requirements.

I have a Bachelor's degree and a Master's degree in Aerospace Engineering from the University of Florida, the 5th ranked public school in the United States in 2022 according to U.S. News and World Report [7]; there are currently 99 universities, colleges, technical colleges, and community colleges on the FAA's Institutional Authority List [2] which authorize a Restricted ATP pathway in which I am desperate to obtain. The approved degrees span a broad range and include programs such as Aviation Technology and Aviation Science. Are these programs direct highly simplified mirrors of an Aerospace Engineering degree but are included in the FAA's Institutional Authority List simply due to including pilot training in their curriculum?

This regulation was NOT in place when I attended the University of Florida so I believed earning a Bachelor's and Master's in Aerospace Engineering was the optimal route, only to be set back shortly after graduation through this regulation at a time in my life which effectively eliminated the pilot career entirely. The topics an institution's program must contain to be approved for its graduates to be eligible for a Restricted ATP are listed in paragraph 9 of Advisory Circular 61-139 [5]. I believe the depth of knowledge and understanding of the required topics is not comparable between many of the degrees listed in the FAA's Institutional Authority List [2] and a graduate with a Bachelor's and a Master's in Aerospace Engineering from one of the nations top universities.

My Master's degree focus was in Flight Dynamics, Systems, and Control Theory. My several graduate projects included programming Matlab M-Files to mathematically model the inherently unstable F-18 fighter jet physical system. I developed optimal (weight factors specific to mission) multivariable computer control system to provide static/dynamic stability and maintain maneuverability through various time-variant disturbances and pilot induced

control surface actuation. I incorporated compressibility effects at Mach numbers through the transonic and supersonic regimes (Mach waves, normal/oblique shock waves, Prandtl-Meyer expansion fans, etc.). I maintained robustness in presence of noise/uncertainties/errors/failures of sensors/actuators incorporating mechatronic effects (phase lead/lag, magnitude gain, pole/zero introduction, natural frequency amplification, etc.). These models were developed through systems of differential equations directly from the fundamental Bernoulli's principle and Newton's laws of motion.

Many degrees on the Institutional Authority List focus on Aviation Science. Any math, science, or engineering graduate will understand that learning equations and solving for variables or learning to read performance charts will help a person understand the "how". It is impossible to fully understand the "why" without deriving these same equations using advanced calculus and differential equations from the fundamental laws of physics.

An Aerospace Engineer may have not directly studied all restricted ATP required topics such as meteorology, but I believe a strong argument could be made that an Aerospace Engineer's knowledge and understanding of thermodynamics, aerodynamics, and fluid dynamics strongly correlates. After all, isn't correlation the highest level of learning according the Certified Flight Instructor's required knowledge of "Fundamentals of Instruction," following rote, understanding, and application?

I worked for nearly five years as an Aerospace Engineer and Senior Aerospace Engineer for Delta Air Lines reverse engineering Boeing and Airbus aircraft structure and systems and engineering repairs. I have completed several training courses offered directly from Boeing. My role primarily served to manage the risk associated with aircraft damage and malfunctions which had no relief in any existing manuals and ultimately make a go / no-go decision. If a repair was deemed safe for flight, I provided mathematical strength analysis on aircraft repairs to ensure strength restoration and fatigue life capability, working under Delta/Boeing/Airbus policies, Ops Specs, FAR's, STC's, and Airworthiness Directives, using manuals, drawings, and engineering documents to maintain airworthiness and determine suitable time-limited repairs, or prevent aircraft from returning to service if further evaluation or permanent repair was deemed required.

Additionally, topics that an Aerospace Engineer may have not focused, such as airspace or weather, other FAA approved training could certainly provide, that is again not considered for a restricted ATP. I have also graduated from Delta Air Lines own highly selective 14 CFR 65 approved Dispatch Academy and I now work as an International Flight Superintendent for Delta Air Lines. 14 CFR 65.55 lists the knowledge requirements that a dispatch certificate applicant must be trained on:

- Federal Aviation Regulations
- Meteorology
- Principles of Air Navigation under Instrument Meteorological Conditions in the National Airspace System
- Air Traffic Control procedures and Pilot Responsibilities
- Aircraft loading including weight and balance and their effect on aircraft performance
- Human Factors
- Aeronautical Decision Making and Judgement
- Crew Resource Management

Additionally, 14 CFR 121.415 requires airlines to provide a training program including knowledge of appropriate Federal Aviation Regulations (i.e. 14 CFR 121) and contents of the certificate holder's operating certificate, operations specifications, and operating manual.

Additionally, there are degrees in ATC, Applied Meteorology, and Dispatch authorizing the Restricted ATP. I work as an international dispatcher at Delta Air Lines coordinating with not only the FAA but international agencies such as EASA and Eurocontrol, as well as oceanic FIRs around the world such as Gander and Shanwick. Applied meteorology and risk manager may best summarize my role as a dispatcher with the major airline. I build IFR flight plans and determine fuel quantities for Delta Air Lines flights knowing applicable regulations and anticipating weather and Air Traffic Control reroutes requiring an in-depth understanding of Air Traffic Control and the National

Airspace System. My role also serves to ensure Delta Air Lines operation is compliant with the FAR's therefore it is my obligation to fully know and understand these regulations.

My commercial certificate and instrument rating are through a part 141 Liberty University affiliate flight school which included both a flight and ground school curriculum. Incredibly, it would seem that I would be best served returning to college and earning a Bachelor's or even Associate's degree at Liberty University's 100% online program. However, because I did not earn my ratings while enrolled with the affiliate university, the regulations again prevent me from satisfying their requirements.

In training for my flight instructor certificate, I scored a 100% on my Fundamentals of Instruction exam and my Flight Instructor Airplane exam. In October 2018, I passed my initial CFI checkride on the first attempt with Jerry Rasmussen, a designated pilot examiner who is a former FBI pilot and a very experienced DPE. He has conducted checkrides for over 30 years and said has never seen any CFI applicant score a 100% on both exams. I went on to score a 100% on my Flight Instructor Instrument Airplane exam.

I began my flight training in 2016 when my personal income reached the level that I could invest into flying. I was also blessed to have met a very kind lady involved with Delta Air Lines pilot hiring who encouraged me that I was not too old to pursue my lifelong dream. I earned my private pilot certificate in early 2016 and now have my CFI and CFII. I have three young sons and provide the sole income for my family; my wife is a stay at home mother maintaining a commitment to our personal values. I was never able to afford to stop working and attend a fast track program such as ATP nor would I have been able to afford the debt from such a program in addition to my student loans from college. My priority was to move my family into a top school zone for my children. All my flying has been in addition to working full time for Delta Air Lines and being an involved father and as a result, progress has been far slower than I would have hoped. I have also created my own instructing business, Flight Dynamics Aviation, LLC [8], under which I freelance instruct relying on quality instruction, professionalism, and ultimately word of mouth. I am currently instructing roughly 50 hours per month, which equates to dedicating roughly 100 hours, in addition to working full time and raising three sons. I currently have approximately 600 hours. I will need to maintain rate this for 18 more months to obtain 1,500 hours rather than 8 months to reach 1,000 hours. I am certainly not looking for a shortcut or approval to circumvent a regulation when the argument could be made that I need to accept that this goal is no longer attainable or simply preserve and continue to sacrifice my personal life.

The reality is that if these very specific training requirements are not satisfied, an aspiring airline pilot would need to spend upwards of a year acquiring the additional 500 hours beyond those required for the Restricted ATP. Worse, this additional 500 hours of flight time would likely be in a small general aviation piston aircraft which would be of little benefit on his/her resume when later applying to a major airline. This may prevent many professionals who must balance a career to provide for themselves and a family while building flight time. Many general aviation pilots are obsessed with aviation but did not have the courage to join the military or may have even faced fierce discouragement, nor the finances or support to earn pilot certificates until an income was developed. Additionally, if the decision was not made at 18 years old to pursue a specific aviation degree at a specific institution while accruing extreme student loan debt in some of the most expensive flight training environments in which many 141 approved universities have become, the likelihood of an airline career becomes significantly more unlikely. This alone may make becoming a professional pilot the most limiting career choice.

An additional perspective to note is that of someone who graduated college prior to the regulation being enacted. A person pursuing Aerospace Engineering with the belief that they were preparing themselves to the highest standard to become a pilot will have actually backed themselves into a corner if they have family or financial responsibilities that come with age as one develops their own income to pay for flight training. These regulations were not in place when I was in college. Prior to the regulation and maybe even after it has been enacted, many experienced pilots guide aspiring pilots to pursue a degree such as Aerospace Engineering to provide multiple skillsets as a backup to flying in case, for example, a medical certificate is lost or the industry suffers in its infamous, volatile, and cyclical manner. If intent of the regulation prevails, could certain degrees not previously approved be grandfathered in to satisfy the R-ATP on a case-by-case basis?

Additionally, I have spent many hours in the cockpit jumpseat on Delta Air Lines aircraft during 14 CFR 121 operations. These observation flights are mandated by 14 CFR 121.463 as a qualification to perform my role as a dispatcher. The experience and education gained through these flights highlight their regulatory requirement. Exposure to pilot decision making and cockpit communication relevant to unanticipated weather, ATC communications, landings with a tailwind or near a thunderstorm, low level wind shear, etc. These pilots are the best in the world and sitting with them in the cockpit during their 14 CFR 121 operation has taught me considerations that I keep with me as a dispatcher, pilot, and instructor.

While I highlight my situation, my attempt is to highlight the exclusion that occurs when broadly defining a career limiting regulation. This regulation broadly determines some training as a suitable substitute for experience and deems other training an insufficient. Unfortunately, it is impossible for the list of FAA approved training pathways to be completely comprehensive; the FAA will undoubtedly exclude other qualified pilots this country needs in the cockpit. Potentially less skilled pilots will be hired into the major airlines due to checking certain boxes, irrespective of whether a higher level of understanding or knowledge was obtained. This could and likely will impact aviation safety in the airlines in the future as senior pilots continue to retire and hiring accelerates rapidly and the quality of pilots in the regionals deteriorates.

As it is said, the best way to learn is to teach. I ask that the FAA consider not as an amendment to the regulation but instead concerning specific petitions, that while a FAR 141 graduate is granted a restricted ATP at 500 fewer hours than someone who has not satisfied the R-ATP requirements due to the FAR 141 “superior” classroom training and curriculum, these same FAR 141 graduates often instruct in FAR 141 environments. As a result, these FAR 141 graduates do NOT teach these same ground topics due to their classroom replacement. Instructors in the FAR 61 environment often spend dozens of hours per month in the FBO or classroom teaching these same ground topics without assistance. I would argue that a diligent instructor who personally invests in the success of their students in the FAR 61 environment spends significantly more hours teaching the topics highlighted in paragraph 9 of Advisory Circular 61-139 [5] than FAR 141 graduates who, in many cases, rely on their FAR 141 counterparts for ground instruction while they simply show up to the airplane and “instruct” as their clear and undeniable goal is to build time. The “superior” ground training and structured curriculum which provides FAR 141 graduates a reprieve of 500 hours often acts as these same FAR 141 graduates turned instructors’ greatest catalyst and excuse to avoid developing their knowledge through instruction. In this manner, a FAR 61 instructor at 1,000 hours may have superior knowledge than a FAR 141 graduate and instructor at 1,000 hours.

I was told on numerous occasions when training towards my CFI rating that real learning begins through instructing – at 1,000 hours, will I have less knowledge, understanding, or ability to apply or correlate than a graduate of an approved Restricted ATP program?

I plead that the intent of this regulation be known, understood, applied, and correlated to qualified individuals who this country would benefit from having in the cockpit. Whether myself or another pilot in a similar situation with whom family and personal commitments with limited support would otherwise prevent the pursuit of the additional 500 hours to 1,500 hours, I plead that the FAA consider the quality of the individual and consider if their background satisfies or surpasses the qualifications required in the Institutional Authority List.

While I am now a “career-changer”, my obsession with aviation is not new. While in undergrad studying Aerospace Engineering, I was in the Air Force ROTC. I stopped the program when accepted into the Aerospace Engineering Master’s program; I wanted to become an expert in aerodynamics, flight dynamics, and design fly-by-wire control systems. There hasn’t been a day since that I don’t look back on this decision with regret. I tutored other college students in math, science, and engineering extensively throughout both undergrad and graduate school. I taught AP Calculus at an aviation high school on Sun ‘n Fun’s campus while in graduate school – a school which is viewed as very favorable on students’ resumes. I regularly help other CFI’s with topics ranging from meteorology to aerodynamics. I would love to one day use my background to instruct in the cockpit at a higher level but I have a lot to learn and the major hurdle into jet aircraft to overcome. My path towards aviation is not new and no one wants this more than I. After college, I did not have the finances to pursue flying; I needed to wait until I had developed an income. My progress has been interrupted on a cadence with blessings such as three healthy sons. I

have been studying aviation to a very high level and working in the aviation industry combined for 15 years, yet this regulation equates my knowledge and experience in the interest of the highest priority, safety, to someone who is just completing a 9 month “zero-to-hero” fast-track pilot training program. Ultimately, this regulation impacts those with more financial responsibilities the greatest. Understanding, this is not the concern of the public; safety is paramount. However, many aviators whose presence in the cockpit would provide a potentially higher level of safety than the alternative is in the interest of the public.

My desperation of this petition being approved is not in the interest of personal convenience but opportunity – the achievement of my lifelong dreams may realistically depend on the outcome of this petition. This pursuit comes with the sacrifice of my wife and significant time with my sons. Some risk management, no-go decisions are not acute but chronic - long term no-go decision due to caution in areas outside of aviation – recognizing external pressures and “get-there-itis” and ultimately making prudent decisions. I do ask that the cautious responsibility behind these decisions be considered as transferable to the cockpit.

My knowledge as an aviator has been demonstrated on many occasions to be my strength and not my weakness. A presumptuous request such as this is not in my nature however last month on my 37th birthday after a lifelong obsession of this pursuit, I decided that I must take a leap of faith. If you have any additional questions about my character or background, I would be honored to have a conversation in person. **I pray and implore you to consider my education and experience as implicit to the Institutional Authority List and to satisfy the Restricted ATP at 1,000 flight hours requirements.**

Benefit to the Public

In a previous role, I worked as a programmer and analytics specialist in Flight Ops for Delta Air Lines. As part of my role, I supported the pilot training department and at the time there was an increased focus on training curriculums and module failure rates. The motivation for developing key performance indicators of pilot training module failure rates was the intuitive anticipation of the diminishing quality of pilots being hired as max hiring continues over the coming years. While all pilots flying in the regionals may have a specified amount of flight time and valuable experiences, their backgrounds vary vastly. The public benefits from airlines having the safest and most qualified pilots in the cockpit.

I ask that the FAA keep an open mind to exemptions to a regulation which broadly creates a massive hurdle for some of the safest yet arbitrary pilots; a regulation which discriminates against those who did not have the support or resources at an earlier age and disparately challenges pilots seeking an airline career at a later age. This regulation ultimately eliminates aviators who potentially may be safer than their alternatives from flying the public in the airlines.

Summary to be published in the Federal Register

In accordance with 14 CFR 11.87(a), I thoughtfully request that the FAA not publish a summary of my petition for exemption and request public comment due to the precedent setting nature of such a request. I feel that the hesitancy of approving a request such as this due to the fear of setting a precedent may be reason enough to deny the request, independent of the plausibility of the request itself. The precedent alone would not be my fear; however, I do fear the FAA’s resulting challenge of creating consistent exceptions when no two people’s education and experiences are identical and the imminent need to explain the disapproval of a potential bombardment of requests and further draw “lines in the sand” would be reason enough to deny my request, if it were to become public.

Humbly,

Charles Hunt

References:

[1] https://www.faa.gov/news/press_releases/news_story.cfm?newsId=14838

- [2] https://www.faa.gov/pilots/training/atp/media/Institutional_Authority_List.pdf
- [3] <https://www.usna.edu/AeroDept/recruit.php>
- [4] <https://www.faa.gov/pilots/training/atp/>
- [5] https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_61-139.pdf
- [6] <https://www.usafa.edu/academic/aeronautical-engineering/>
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